

ABSTRACT OF THE INVENTION

The present invention relates to an optical component and the like having a structure that can increase the absolute value of the angular dispersion, and also can reduce the temperature dependence of the diffraction angle. The optical component comprises a diffraction grating element and a prism. The prism is composed of a material with a refractive index of  $n_1$ , and the diffraction grating element and the prism are surrounded by a material with a refractive index of  $n_0$ . In the case that light of wavelength  $\lambda$  is incident on the diffraction grating element at an incident angle of  $\theta_0$ , taking the incident angle with respect to the first surface of the prism to be  $\theta_2$ , taking the emission angle of the light emitted from the second surface of the prism to be  $\theta_5$ , taking the temperature coefficient of the diffraction angle in the diffraction grating element to be  $F_g$ , taking the temperature coefficient of the emission angle  $\theta_5$  of the light emitted from the second surface of the prism, assuming that the incident angle  $\theta_2$  of the light incident on the first surface of the prism is fixed regardless of the temperature, to be  $F_p$ , and taking the magnification rate of the angular dispersion caused by the prism to be  $M_p$ , the relationship " $n_1 > n_0$  AND  $|\theta_5| > |\theta_2|$ " or " $n_1 < n_0$  AND  $|\theta_5| < |\theta_2|$ " is satisfied, whilst also

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satisfying the relationship “ $-2M_pF_g < F_p < 0$ ” or “ $-2M_pF_g > F_p > 0$ ”.